TITLE	QM Vibration Functional Test
DOCUMENT TYPE	REPORT
DOC No.	AMST/ACQFV/1/A
ISSUE No.	1
DATE	27/01/06

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CHANGE RECORD

Issue	Date	Affected Pages	Description of Change	Change Autority

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1. Test note

During the vibration of the AMICA camera, at SERMS facility, the functional test of the on board electronics, contained inside the composite structure of AMICA, was possible in a rather limited way from outside. In fact from the output connector of the composite structure only the signal carrying the communication protocol, which is a"pseudo spacewire", a form of our own modified "spacewire" protocol, was accessible and available to be monitored by an oscilloscope. So that the monitoring capability of the camera functionality had to be limited to the visual interpretation of the displayed signal. As a consequence some kind of possible malfunctioning, like that due to the digital control of the camera, could easily be monitored, while others, like those due to charge transportation inside the CCD, could never come up.
The reason for that was that the receiving part of the camera, which will be located apart on the AMS instrument, was not ready at that time.

Non Conformance: During the preliminary phases of the setup operations some handling led to the break of the wire carrying the +12V supply to the electronics. The prompt repairing of the damage was not feasible due some mechanical mounting difficulties. However, by taking into account what previously said about the scarce significance of the signal monitoring and that during the test the camera electronics would be left off, a decision was taken to go on with the vibration tests, conscious that in case of failure it would never be possible to state which of the tests was responsible for it.

2. Functional verification

After the test sequence was finished, the camera was brought to the CARSO laboratory in Trieste and there examined, first visually then electrically on all significant signals. Some CCD images were also taken with the laboratory equipment.
The result of the careful inspection and testing was that after the vibrations everything behaved exactly as before.
The vibrational test had no impact on the functionality of the AMICA electronics, as can be seen in the following picture taken after the camera inspection.

Image of a bright spot, taken in the laboratory after the camera inspection

I(+12V) (mA)	I(-12V) (mA)	I(+3.3V) (mA)
185	71	59

Camera Current